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Karl E. Mundt
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*An adult bald eagle soars majestically above the Missouri River breaks, its white head and tail sparkling in the crisp December sun. It peers downward, searching for prey. Suddenly, the eagle folds its wings and swoops downward in a mind-blurring, 100 mile-per hour dive. Checking his descent, the eagle skims above the Missouri's ice-blue waters and deftly thrusts a talon into the waters. He pulls up and wings toward a tall cottonwood tree carrying his breakfast, a silvery shad.*

*The eagle flares his wings and lands upon a gnarled limb. A scream of defiance warns potential intruders that this woodland is the realm of a bird of strength and courage — the symbol of our Nation.*

*Will future generations enjoy similar wildlife spectacles? Possibly not because the bald eagle faces the threat of extinction. Karl E. Mundt Refuge, the first Federal eagle sanctuary, is helping assure the perpetuation of the species.*

## HISTORY

In early times, eagles perched in timber which was found along the Missouri River. The wild river and its surrounding habitats yielded fish, waterfowl, and other wildlife which were preyed upon by eagles. Construction of dams converted the wild river into open lakes and destroyed the eagles' habitat.

Forced from their traditional haunts, the eagles searched for alternate wintering areas and some found the tail waters below the Ft. Randall Dam to their liking. In this open water they found an abundance of their favorite food — fish such as goldeye, shad, and white bass plus a variety of ducks and geese.

The eagles found excellent stands of mature cottonwood trees adjacent to the open water. This combination of abundant food and ideal roosting habitat proved successful and wintering eagle populations began to increase below the Ft. Randall Dam. In 1967, a peak of 283 eagles was reached establishing the Ft. Randall population of wintering eagles as the largest in the lower 48 states.

Although a portion of the wintering eagle flock roosted in woodlands managed by the U.S. Corps of Engineers, the main roosting areas were on private lands below Ft. Randall Dam. In order to preserve this National treasure, a project was launched by the 7-Eleven Food Stores Division of the Southland Corporation and the National Wildlife Federation.

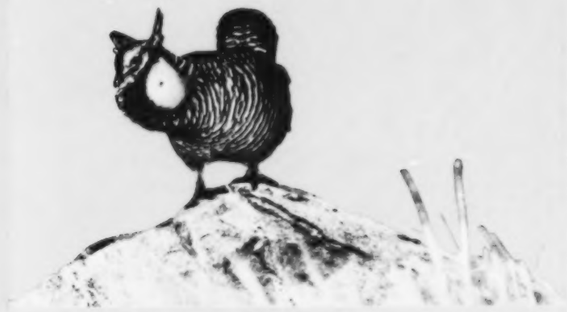
Receipts generated by the sale of endangered species drinking cups were set aside in the "Save A Living Thing Project." The Southland Corporation raised $250,000 which was transferred to the National Wildlife Federation. With these funds, the Federation purchased 780 acres of river bottom and obtained a perpetual easement which guaranteed the preservation of an additional 300 acres of important woodlands. Administration of the land was turned over to the U.S. Fish & Wildlife Service on December 19, 1974. The new refuge was named after the late Karl E. Mundt, a South Dakota Senator who was a strong supporter of the Endangered Species Act of 1966.

## WILDLIFE

The refuge contains one of the last stretches of truly natural Missouri River bottomland. A wide variety of wild species utilize this unique habitat.

Countless thousands of ducks and geese frequent the refuge during the annual migrations, while water birds such as the ring-billed and Franklin's gulls, common and least terns, double-crested cormorants and white pelicans rest and feed along the wide Missouri.

Both whitetail and mule deer slip secretly through the dense woodlands, often shadowed by coyotes or bobcats.



*A greater prairie chicken performs his springtime courtship ritual. Photos by Gary Zahn, U.S.F.W.S.*

Rio Grande turkeys roost in the towering cottonwoods, while raccoons, mink, skunks, foxes, and cottontails meander through the underbrush.

Along the woodland margins, flocks of ring-necked pheasants and bob-whites scratch for wild and cultivated seeds, while occasional red-tailed and ferruginous hawks watch from above, waiting for a chance to strike.

Dozens of species of songbirds native to the cottonwood-willow-dogwood habitat zone can be found on the refuge. During the spring migration and nesting season, the woods seem ablaze with striking colors as warblers, orioles, cardinals, grosbeaks, and bluejays dart through the treetops. Each spring, well-known songsters such as brown thrashers, mockingbirds, meadowlarks, and song sparrows fill the woods with nature's harmony.

*Large flocks of mallard ducks spend the winter months on the Missouri River.*

## MANAGEMENT FOR DIVERSITY

Food plots containing corn, sorghum, wheat, and millet are planted by refuge managers to attract both migratory waterfowl and resident wildlife. These birds and animals are an alternate food source to the wintering eagles.

Cottonwoods are planted periodically to provide future eagle roosting habitat. Shelterbelts are also planted for resident wildlife species.

Two-hundred acres of native grasslands are grazed periodically to maintain the vigor of the grass and to add diversity to the river-breaks ecosystem. These mixed grass prairies contain a variety of unique wildflowers.

## EAGLE HABITS

Small numbers of eagles begin to move onto the refuge during late October, with peak populations occurring during December and January. Immature eagles outnumber the whitehead adults during November, however, the December-January flock contains 70-80 percent adults.

During their winter stay, most eagles perch within 50 feet of the river-bank, preferring tall cottonwood trees in close proximity to the source of food. There appear to be five major communal roosts located within the Ft. Randall-Karl Mundt wintering area. Communal roosting promotes efficient exploitation of the food resources in the wintering

*Mule deer inhabit the refuge uplands.*

area and allows a maximum number of eagles to roost at sites protected from the chilling winter winds.

The eagles feed mainly on fish in the Ft. Randall Dam tailwaters during the morning hours. Mallards, rabbits, and pheasants are also eaten as the fish supply declines.

During late January and early February, many of the eagles begin to follow the waterfowl flocks which feed in private cornfields. The refuge eagle population quickly declines as the feeding eagles shift to several roosts throughout Charles Mix County. This eagle dispersal continues and, by mid-March, bald eagles become a rare sight on the refuge.

## EAGLE WATCHING

Eagles will abandon their roosts if disturbed too much by humans. Therefore, public use on the Karl Mundt National Wildlife Refuge is prohibited. An excellent eagle observation point is located on Corps of Engineers property directly below the Ft. Randall Dam. From this observation point above the tailwaters, visitors can get close-up views of the eagles as they deftly pluck fish from the fast-flowing waters. Visitors should refrain from disturbing eagles perched among the cottonwoods during the mid-day loafing period.

## EAGLES AND THE GOVERNMENT

The U.S. Fish and Wildlife Service has programs which address each of the major threats to eagles.

Habitat Destruction - The Service coordinates with other Federal agencies to prevent habitat losses caused by Federal development projects and by private developments which require Federal permits. Shooting, Trapping and Commerce - Law enforcement agents employed by the Service protect eagles from being shot, trapped, and commercially traded.

Pesticides - The U.S. Fish and Wildlife Service has conducted extensive research on the negative impacts that pesticides have on reproduction of several predatory birds. The Service monitors pesticide levels in the environment on a nationwide basis.

Electrocution - The Service cooperates with power companies to design power poles which will prevent electrocution of eagles.

## EAGLES AND YOU

You can do a lot for eagles and other endangered wildlife by learning more about how they are protected. You can personally work to conserve endangered animals and plants by joining one of the many wildlife conservation organizations. You may also register your opinion when the Service makes proposals to add species to the endangered list and to designate critical habitat. You should report any violations of the laws protecting imperiled wildlife.

*Bald eagle, U.S.F.W.S. photo by K. Kenyon.*

## EAGLE FACTS

- The bald eagle was officially listed as an endangered species in 1978.
- North America's bald eagle population is estimated at 90,000 to 136,000. Most of these are in Alaska.
- The male eagle is smaller than the female. The adult female has a wingspan of about 8 feet and weighs about 10 to 14 pounds. The male has a wingspan of about 7 feet and weighs about 8 to 10-1/2 pounds.
- The birds' scientific name, *Haliaeetus leucocephalus,* means "white-headed sea eagle".
- Eagles may live 30 years or more in the wild.
- Eagles have been clocked at speeds of over 100 miles-per hour while diving on their prey.
- Eagles mate for life, returning to the same nest year after year.
- One to three eggs are laid, hatching in about 35 days. Normally, only one chick survives.
- Young learn to fly at three months of age and leave the nest when they reach their fourth month.
- The white head and tail feathers develop during the fourth or fifth year. Young birds may be mistaken for large hawks.

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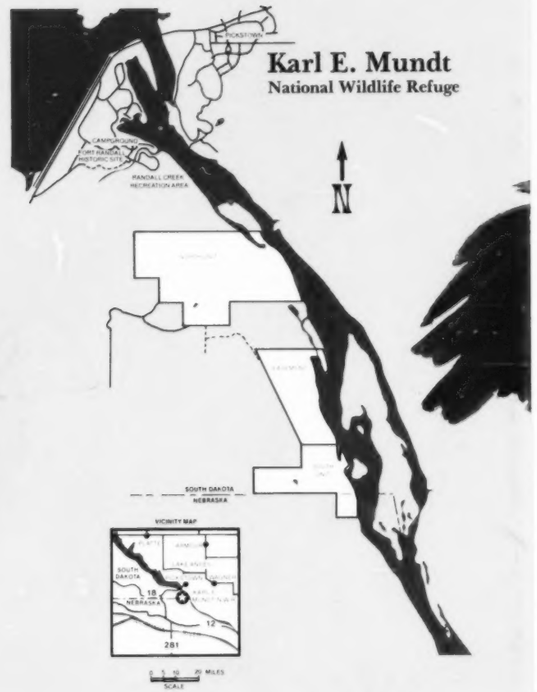


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